



**Office of Title I Academic Support**

# **Tools for Designing Curriculum through Mapping and Aligning**

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Developed with assistance from  
Great Lakes East Comprehensive Assistance Center at Learning Point Associates

## **Introduction**

The Indiana Department of Education (IDOE), Office of Title I Academic Support developed this set of materials to assist schools and districts design a high-quality curriculum. The “Tools” are not meant to stand alone but serve as one of many resources that schools and districts will want to study in developing a new curriculum.

The Tools describe a process for creating a curriculum called “mapping and aligning the curriculum,” which was developed by Heidi Hayes Jacobs. The process has been used by schools and districts throughout the U.S. and around the world to align the curriculum to state standards and within and across grade levels. Tool 16, the last tool, provides a listing of the IDOE Title I requirements for districts in corrective action as they design a new English language arts or mathematics curriculum.

## **Table of Contents**

Tool 1: Definition – What Is a Curriculum?	1
Tool 2: The Essential Components of a High-Quality Curriculum	2
Tool 3: Curriculum Self-Assessment Tool–How Does Our Curriculum Measure Up?	4
Tool 4: Why is a Curriculum Important?	5
Tool 5: Research and Literature Review: How Does Curriculum Affect Student Learning?	7
Tool 6: Curriculum and No Child Left Behind – How Do They Connect?	9
Tool 7: How a Curriculum Is Developed: The Mapping and Aligning Process	10
Tool 8: How a Curriculum Is Developed: The Steps	13
Tool 9: Resources for Curriculum Mapping	14
Tool 10: Getting Ready: Create Teacher Buy-In	15
Tool 11: Getting Ready: Establish a Leadership Team and an Organizational Structure	17
Tool 12: Getting Ready: Interview and Hire a Consultant	18
Tool 13: Getting Ready: Select a Software Program for Mapping	19
Tool 14: Mapping and Aligning Tasks: The First Six Months	21
Tool 15: Mapping and Aligning Tasks: The First Year	22
Tool 16: Requirements for Districts in Corrective Action: Designing a New Curriculum	24

## Tool 1: Definition – What Is a Curriculum?

As defined by Bredekamp and Rosegrant (1995), a *curriculum* is:

An organized framework that delineates the **content** that children are to learn, the **processes** through which children achieve the identified curriculum **goals**, what **teachers do** to help children achieve these goals, and the **context** in which teaching and learning occur (p. 16; emphasis added).

To clarify the meaning further, Table 1 identifies what a curriculum is and what it is not.

**Table 1. Characteristics of a Curriculum**

<b>A Curriculum:</b>	<b>A Curriculum:</b>
<ul style="list-style-type: none"><li>• Is the “unpacking” or the interpreting of the state standards into a set of skills to be learned.</li></ul>	<ul style="list-style-type: none"><li>• Is not a copy of the state standards or indicators.</li></ul>
<ul style="list-style-type: none"><li>• Is a well-conceived hierarchy of skills based on students’ cognitive, language, and social-emotional development.</li></ul>	<ul style="list-style-type: none"><li>• Is not a scope and sequence chart from a publisher, chapter headings from a textbook, or titles of stories.</li></ul>
<ul style="list-style-type: none"><li>• Is developed by all teachers working in collaborative grade-level and content-area teams.</li></ul>	<ul style="list-style-type: none"><li>• Is not developed by a few people in the school or district or by a publishing or textbook company.</li></ul>
<ul style="list-style-type: none"><li>• Is a planning and teaching tool that affects instruction and is adapted and differentiated to correspond to the needs and strengths of the learners.</li></ul>	<ul style="list-style-type: none"><li>• Is not a document that sits on a shelf and never changes.</li></ul>
<ul style="list-style-type: none"><li>• Includes content, skills, assessments, state standards, and other information that teachers use in their planning and teaching.</li></ul>	<ul style="list-style-type: none"><li>• Is not simply a restating of the state standards.</li></ul>
<ul style="list-style-type: none"><li>• Describes what the students need to know and be able to do.</li></ul>	<ul style="list-style-type: none"><li>• Is not a description of what the teacher will do (e.g., a lesson plan).</li></ul>
<ul style="list-style-type: none"><li>• Is aligned with the state standards and across and within grade levels and content areas with increasing cognitive difficulty at each level.</li></ul>	<ul style="list-style-type: none"><li>• Is not individually unique with each teacher developing his or her own interpretation of the standards and without agreement within or across grade levels.</li></ul>

<sup>1</sup> Bredekamp, S. & Rosegrant, T. (1995), (Eds.). *Reaching potentials: Transforming early childhood curriculum and assessment, Volume 2*. Washington, DC: National Association for Early Childhood Education.

## **Tool 2: The Essential Components of a High-Quality Curriculum**

For many of us, the curriculum we received on our first day of teaching was a teacher's manual and, perhaps, a scope and sequence chart. Today, a curriculum is much more than a teacher's manual, student textbook, or pacing guide.

With the enactment of NCLB, state departments of education developed academic standards and standardized achievement tests. Some SEAs developed state curriculum as a third element. In Indiana, the department of education entrusted the designing and implementing of standards-based and aligned curriculum to individual districts and schools.

To assist districts and their schools in this endeavor, IDOE Title I reviewed the research and best practices regarding the components of high-quality curriculum. Five components emerged as foundational or essential: content, corresponding state standards, skills, formative assessments, and time frame. These components are required in the newly designed English/language arts or mathematics curriculum of districts in corrective action. Some districts may find additional components to be useful and are welcome to include those in the curriculum as well.

### **Essential Components of High-Quality Curriculum**

#### **1. Content**

- The subject matter or topic to be introduced; may emerge from classroom monthly themes/topics or six-week projects.
- Stated as a noun or noun phrase.
- Examples: "Persuasive letter," "Analogies," "Subtraction, whole numbers," "Rational numbers."

#### **2. State Standard**

- The state standard that corresponds to the content.

#### **3. Skills**

- What the learner must be able to know or do (as related to the state standard).
- Stated using action verbs.
- Is the most critical component of the curriculum.
- Developed by teacher groups discussing and determining the underlying meaning and specifics of the state standard
- Example: Persuasive letter: "Uses a teacher-provided stem (e.g., "I know that you like ...") to connect to reader's interest in the topic.

#### **4. Formative Assessment**

- Describes how the skill will be measured to determine level of student learning.
- Conducted on daily or weekly basis.

- Includes teacher-developed observations, rubrics, interviews, and quizzes with descriptions or details of each provided.
- May be commercially produced formative assessments such as Wireless Generation or Acuity.

## **5. Time Frame**

- The week(s), month(s), grading periods that teaching and learning occurs.

## **Additional Curriculum Components**

In addition to the five required curriculum components described above, some educators find additional components to be useful. However, experience shows that developing fewer components reduces the complexity of the mapping task. The components below might be added to later drafts of the curriculum.

## **6. Essential Questions**

- An overarching question from the student’s point of view that demonstrates the value and purposes of learning for the student.
- Example: “Why is it important to consider the audience and their needs in writing requests, thank yous and invitations?”

## **7. Activities**

- Description of the key exercises that all teachers use with the students.

## **8. Resources**

- Key materials that all teachers agree to use, such as website links, titles of videos, section titles from textbooks, and page numbers.
- Teachers may add additional personal sources in their lesson plans.

## **9. Modifications and Accommodations**

- Modifications—A modification changes what a student is expected to learn to allow the student to participate meaningfully with other students. Examples are: an outline as the assignment in place of an essay; choosing from a word bank of choices for answers; or use of an alternative book on the same topic as the other students.
- Accommodations—An accommodation does not substantially change the instructional level, content, or performance criteria. Examples are: taking a test orally (rather than written), having a large-print textbook, or a having additional time to take the test.

### Tool 3: Curriculum Self-Assessment— How Does Our Curriculum Measure Up?

Most teachers and administrators report that “Yes, we have a curriculum.” But what is the quality of that curriculum? Was the curriculum developed by all teachers? Is it aligned to the standards and across grade levels? Have the skills that all teachers will teach been agreed upon?

Districts in corrective action use the tool below to determine the quality of their English/ language arts or mathematics curriculum. IDOE Title I repeats the process and compares the two results. The assessment criteria are the existence and quality of the five essential components from the curriculum at Grades 3, 8, and 10.

**➡ Directions:**

Assess Grades 3, 8, and 10 of the district curriculum by rating the components as follows:

- 1—the component is missing or does not correspond to the descriptors
- 2—the component is present and includes some of the descriptors
- 3—the component includes all of the descriptors

**Table 2. Self-Assessment of Curriculum**

Our curriculum includes the following components	Grade 3			Grade 8			Grade 10		
<b>1. Content</b> <ul style="list-style-type: none"> <li>Subject matter or topic to be introduced; emerges from monthly themes/topics or six-week projects</li> <li>Stated as a noun or noun phrase</li> </ul>	1	2	3	1	2	3	1	2	3
<b>2. State Standard</b> <ul style="list-style-type: none"> <li>The state standard that corresponds to the content.</li> </ul>	1	2	3	1	2	3	1	2	3
<b>3. Skills</b> <ul style="list-style-type: none"> <li>What the learner must be able to know or do (as related to the state standard)</li> <li>Stated using action verbs</li> <li>Developed by teacher groups discussing and deciding the underlying meaning of the state standard</li> </ul>	1	2	3	1	2	3	1	2	3
<b>4. Formative Assessment</b> <ul style="list-style-type: none"> <li>Describes how the skill will be measured to determine level of student learning</li> <li>Conducted on daily or weekly basis</li> </ul>	1	2	3	1	2	3	1	2	3
<b>5. Time Frame</b> <ul style="list-style-type: none"> <li>The week(s), month(s), grading periods that teaching and learning occurs</li> </ul>	1	2	3	1	2	3	1	2	3
Our E/LA or mathematics curriculum is of high quality with well-developed required components. ____ Yes ____ No									

## Tool 4: Why Is a Curriculum Important?

➤ *Directions:* Read the story below and answer the questions.

The door hit the wall hard as the twins burst into the house. “Mom, we got our report cards today!” they shouted. Sharing in her second-graders’ excitement, Mom quickly opens the cards. But something is wrong. Lucy, who is the stronger writer of the two, received a checkmark under “Needs significant improvement.” Luke, on the other hand, received “Mastered.” Mom carefully reads the state standard alongside the checkmarks: “Writes a brief description of a familiar object, person, place, or event that: (a) develops a main idea and (b) uses details to support the main idea” (Indiana standard 2.5.2). Baffled by the results, Mom makes appointments to meet with the twins’ teachers the next day.

◆ *Discussion:* What are some possible reasons that Luke received a higher mark on this standard than his sister?

During the conference, both teachers provide examples of the children’s homework, simple book reports, and reading diaries that were used to determine their grades. Both teachers also share a checklist or rubric they use to grade the student work for this standard, as shown in Table 3:

**Table 3. Checklist for Grading Student Work**

<b>Luke’s Teacher: Checklist</b>	<b>Lucy’s Teacher: Checklist</b>
1. Copies the main idea from the reading.	1. Writes original sentence presenting the main idea.
2. Rewrites two details from the reading.	2. Presents three or more details in own words.
	3. During the six-week period, writes a total of eight descriptions.
	4. Uses capital letters to begin sentences and punctuation at the end of sentences.

◆ *Discussion:* Based on the checklists, what is a probable reason that Luke received a higher mark on this standard than his sister?



The two teachers have very different expectations, even though both teach second grade. Each teacher interpreted the state writing standard differently, with Lucy's teacher having much higher expectations of her students than Luke's teacher.

◆ *Discussion:*

1. Do you think that teachers in your school/district interpret the standards identically or differently?
2. What evidence do you have to support your opinion?

This is not an uncommon occurrence within grade levels in the same school and certainly across schools in the same district. When teachers do not meet together to interpret the meaning or skills underlying a standard, each teacher interprets the standard differently, including what it looks like when students have a basic knowledge versus mastery of the standard.

◆ *Discussion:*

1. How does the district support teachers, principals, and schools in designing a curriculum as described above?
2. What evidence exists that the curriculum is implemented consistently by all teachers?

## **Tool 5: Research and Literature Review: How Does Curriculum Affect Student Learning?**

“In the array of factors that define high-performing schools, curriculum alignment enjoys a position of exceptional prominence” (Murphy, 2007, p. 75).

What is known about curriculum and its impact on student learning? Both research and expert opinion state that a rigorous, standards-based, grade- and content-level-aligned curriculum is one of the key components of high-performing schools. An aligned and coherent curriculum is routinely listed in the literature as one of several characteristics of high-performing schools.

In one study, teachers and administrators from 50 school districts ranked *curriculum alignment* as the number one practice that led to increased student achievement (Kercheval, 2001). In a large-scale survey of almost 3,000 teachers and principals in California, “implementing a *coherent, standards-based curriculum* and instructional program” was selected as second in a list of practices associated with high levels of student achievement (EdSource, 2006, p. 2; emphasis added) with attention to student learning being the number one response.

The importance of curriculum emerged in a 2006 report of 70 districts that applied for the Broad Prize, an award given to urban school districts that “significantly improve student achievement while reducing achievement gaps among ethnic groups and between low- and high-income students” (Zavatsky, 2006, p. 69–70). All five finalists indicated that their success in part belonged to developing and implementing curricula that were detailed and properly sequenced, aligned between grades and across all schools, developed by classroom teachers and curriculum specialists from schools and district offices, and which often included higher expectations than the state standards.

In addition to the research, educational scholars write of the importance of the high-quality curriculum. A *guaranteed and viable curriculum* receives a ranking of first of 15 school-level factors that impact student achievement in Marzano’s (2003) review of the research. Educational scholar Herbert J. Walberg (2007) encourages those in charge of restructuring schools “*to align instruction with state standards*” (p. 87; emphasis added) as the first in a list of 10 principles to improve achievement.

### **References**

- EdSource. (2006, June). *Similar students, different results (SSDR): Why do some schools do better?* Retrieved October 3, 2007, from [http://www.edsource.org/pub\\_abs\\_simstu05.cfm](http://www.edsource.org/pub_abs_simstu05.cfm)
- Kercheval, A. (2001). *A case study of key effective practices in Ohio’s improved school districts*. Bloomington, IN: Indiana Center for Evaluation. Retrieved October 3, 2007, from [http://www.indiana.edu/~ceep/projects/PDF/200107\\_Key\\_Effec\\_Prac\\_Interim\\_Report.pdf](http://www.indiana.edu/~ceep/projects/PDF/200107_Key_Effec_Prac_Interim_Report.pdf)
- Marzano, R. J. (2003). *What works in schools: Translating research into action*. Alexandria, VA: Association for Supervision and Curriculum Development.

- Murphy, J. (2007). Restructuring through learning-focused leadership. In H. J. Walberg (Ed.), *Handbook on restructuring and substantial school improvement* (pp. 63–75). Lincoln, IL: Center on Innovation and Improvement.
- Walberg, H. J. (2007). Changing and monitoring instruction. In H. J. Walberg (Ed.), *Handbook on restructuring and substantial school improvement* (pp. 77–90). Lincoln, IL: Center on Innovation and Improvement.
- Zavadsky, H. (2006). How NLCB drives success in urban schools. *Educational Leadership*, 64(3), 69–73.

## Tool 6: Curriculum and No Child Left Behind – How Do They Connect?

How does curriculum connect to NCLB? The Act lists six actions from which state departments of education must choose for its school districts in corrective action—three or more years “in improvement” status. After carefully reviewing the six actions, IDOE Title I selected the sanction related to curriculum design as the action that provided the greatest likelihood of increasing student learning.

“Institute and fully implement *a new curriculum* based on state and local content and academic achievement standards that includes *appropriate, scientifically research-based professional development* for all relevant staff.” (Office of Elementary and Secondary Education, 2006, p. 49, emphasis added).

For its part, IDOE Title I is required, according to NCLB, to provide technical assistance for the districts regarding the selected action. Thus, IDOE Title I developed this set of tools and provides curriculum workshops to its districts in corrective action.

Indiana is not alone in realizing the importance of strong district-designed curricula. According to the Center on Innovation and Improvement’s database of state-by-state district and school improvement efforts, other state departments of education are assisting their schools and districts in curriculum design as well. In Illinois, for example, the regional educational service centers are to provide districts and schools with programs and processes in four areas, including standards-aligned curriculum, instruction, and classroom assessment. The Michigan School Improvement Framework, adopted in 2005, consists of a set of strands with corresponding standards. The first strand is “Teaching for Learning—Curriculum, Instruction, and Assessment.” The Rand Corporation produced a midterm report of NCLB in fall 2007 and concluded that “Majorities of school and district administrators in most of the 50 states have engaged in similar improvement strategies: aligning curriculum with state standards and tests, using data for decision-making, and providing extra support to low-performing students.”

Thus, Indiana is in line with other states, as well as with the research (Tool 5), in its emphasis on ensuring its schools and districts develop and implement standards-based, aligned curricula.

### References

- Center on Innovation and Improvement. (2006). *State database*. Retrieved August 24, 2007, from <http://www.centerii.org/centerIIPublic/criteria.aspx>
- Office of Elementary and Secondary Education. (2006). *LEA and school improvement: Non-regulatory guidance*. Washington, DC: U.S. Department of Education. Retrieved October 3, 2007, from <http://www.ed.gov/policy/elsec/guid/schoolimprovementguid.pdf>
- Rand Corporation. (2007). *Passing or failing? A midterm report card for “No Child Left Behind*. Santa Monica, CA: Retrieved March 9, 2008, from <http://www.rand.org/publications/randreview/issues/fall2007/passing2.html>

## **Tool 7: How a Curriculum Is Developed— The Mapping and Aligning Process**

How does a district or school begin to design or develop a new curriculum? The answer is through mapping and aligning the curriculum—a process utilized by educators nationally and internationally.

### **What Is “Mapping the Curriculum?”**

In mapping the curriculum, teachers and administrators work in groups to design the curriculum that is to be taught and learned. At the core of the process is the “unpacking” of the state standards or, put another way, the peeling away of the standard to expose the underlying explicit and implicit skills.

For example, a group of third-grade teachers begin to discuss the skills underlying the standard: “3.3.7 Compare and contrast versions of the same stories from different cultures.” As the teachers unpack the standard, they realize that their students must have prior knowledge of other cultures, languages, and geography in order to compare and contrast the vocabulary, plot, setting, characters, and problems and solutions of two stories. The teachers list 15 subskills embedded in this one standard. The teachers then create a curriculum map, including the five essential components, agreeing upon what and when the subskills will be taught and assessed throughout the school year.

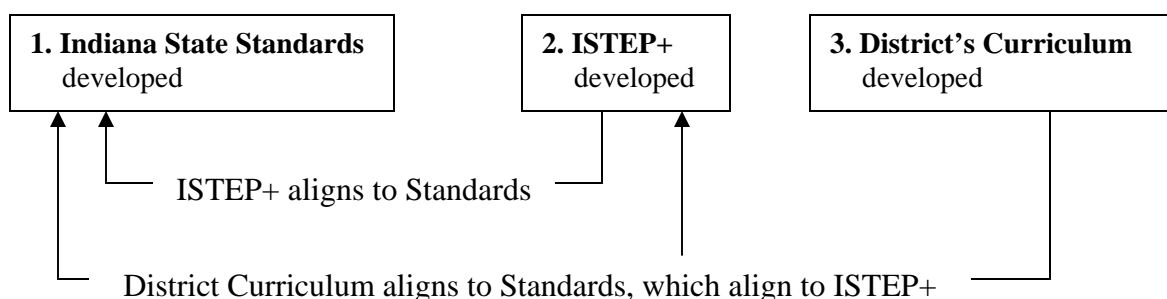
### **What Is “Aligning the Curriculum?”**

Working in groups, grade-level and content-area teachers map the curriculum as described above. At the next level of mapping, teacher groups align the curriculum. A useful metaphor for curriculum alignment is the aligning of tires on a car. After a Midwest winter of snow, ice, and subzero temperatures, rough roads and potholes often require a trip to the mechanic. Without correct tire alignment, a car is difficult to steer, tending to veer from one side to the other creating a rough ride for the passengers—uneven and uncomfortable. In the same way, a curriculum that is uncoordinated and unplanned creates a rough and inconsistent “ride” for the learner. Teachers must ensure that what they teach is aligned with the subskills taught by other teachers at their grade levels and in their content areas, and aligned from one grade to the next with an increase in cognitive demand occurring at each grade level.

Without such an alignment, students face several challenges. First, they are unprepared for the next grade level because they did not gain the skills that next year’s teacher expects them to have mastered. Second, the demand or the level of the skill does not increase, resulting in uninterested and unmotivated students who are forced to “learn” the same information, year after year.

Finally, the curriculum needs to align to the state standards. A curriculum aligned to the standards inherently is aligned to Indiana Statewide Testing for Educational Progress–Plus (ISTEP+) (see Figure 1), eliminating the misguided belief that educators must “teach to the test.”

**Figure 1. Alignment of State Standards, ISTEP+, and District Curriculum**



### **What Needs to Be in Place Before We Begin?**

As with any new project or initiative, curriculum mapping and aligning will require time—time for teachers and principals to work alone and with others. Designing the curriculum through mapping is a two- to three-year process. In addition, mapping the curriculum requires a willingness on the part of teachers to openly share their instructional practices with one another. Many teachers are unaccustomed to sharing what and how they are teaching behind their closed doors. School and district leadership will need to ensure that a culture is created that reflects collegiality through establishing strong team-based approaches such as professional learning teams.

### **What Is the Most Important Part of the Mapping Process?**

The answer is simple: the discussions held by teachers and administrators are the most important part of developing a curriculum. Although the process of writing and filling in charts or maps of what is taught can easily become the focal point, it should not be so. It is as teachers meet in grade level and content area teams to reach consensus that the real work is done. Not since college have most teachers held such professional, student-focused conversations.

### **What Are the Different Kinds of Maps, and Which Ones Are We to Develop?**

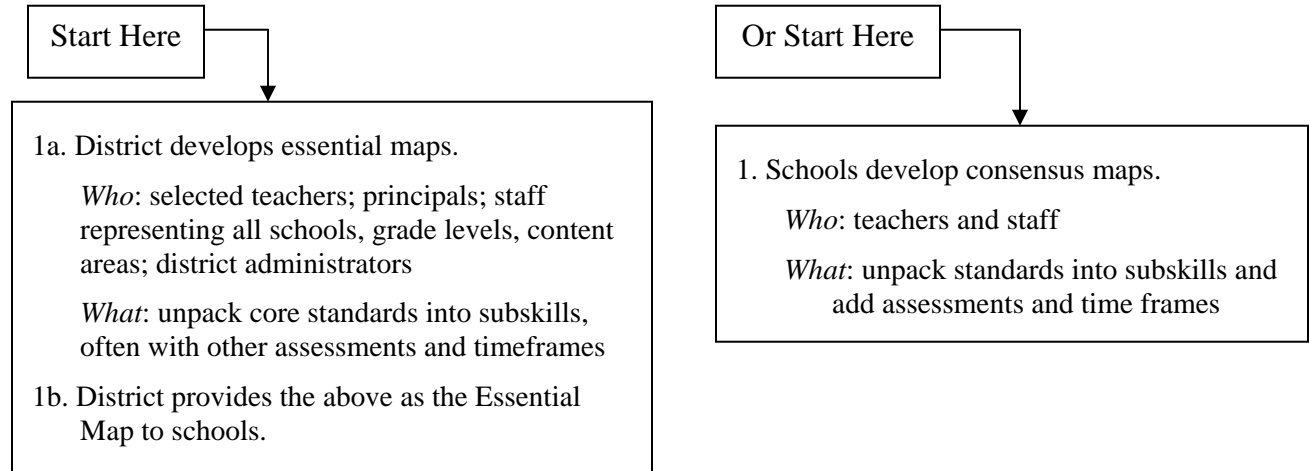
Maps may be developed by the district, the school, groups of teachers, or individual teachers. The IDOE, Title I requirement is for all English/language arts or mathematics teachers to participate in developing the curriculum maps. The mapping and aligning is to occur at the school level, although larger districts may first develop a “core” map similar to the core standards, which is called the *district essential map*. At the school level, groups of teachers work together to create the *school consensus map*.

- **District Essential Map**
  - Created by groups of teachers and administrators to determine the essential or “core” subskills of the standards (or core standards) to be taught, learned, and assessed.
  - From these, the schools develop their consensus maps.

- **School Consensus Maps**

- Created by groups of teachers as they unpack the standards.
- Initially meet in grade-level or content-area groups; later share and improve maps in cross-grade-level and cross-content-area teams.
- Describes the agreed upon skills to be taught, learned, and assessed.

### Where Do We Start?



## **Tool 8: How a Curriculum Is Developed: The Steps**

Heidi Hayes Jacobs (1997), a national curriculum expert, developed a seven-step process for mapping and aligning the curriculum. Schools and districts around the world use this process. For Indiana districts in corrective action, these steps serve as guidelines. Before attempting to implement the steps, district staff should attend workshops and study curriculum mapping books.

### **Step 1: Collect the Data**

- Create maps of what has been taught or what will be taught.
- Begin unpacking the standards, delineating the skills needed to achieve mastery of the standard.
- Consider a standard in terms of its underlying explicit or implicit conceptual understandings, prior knowledge requirements, content knowledge, and cognitive processes (e.g., evaluating, synthesizing, comparing).

### **Step 2: Read-Through of Group's Maps**

- Share and read one another's maps.
- Improve the consistency and quality of the maps through collegial critique; note findings.
- Continue to map, based on feedback received from others.

### **Step 3: Mixed Small-Group Review to Share Findings**

- Meet in groups across grade levels or content areas.
- Continue unpacking standards and noting findings.

### **Step 4: Large-Group Review of All Findings**

- Bring all findings together from smaller groups.
- Collegially and cooperatively discuss findings in terms of gaps, redundancies, consistency, timeliness, and increased cognitive demand.

### **Step 5: Make Immediate Revisions**

- Reach solutions for those findings that allow for quick and mutual agreement.

### **Step 6: Long-Term Planning for Changes**

- Research, study, and investigate the more difficult findings.
- Design a plan of action for resolving the difficult challenges or changes in the curriculum.

### **Step 7: Continue the Cycle**

**Reference:** Hayes Jacobs, H. (1997). *Mapping the big picture: Integrating curriculum and assessment, K–12*. Alexandria, VA: Association for Supervision and Curriculum Development.



## **Tool 9: Resources for Curriculum Mapping**

### **Mapping Books**

- Hale, J.H., (2008). *A guide to curriculum mapping: Planning, implementing, and sustaining the process*. Thousand Oaks, CA: Corwin Press.
- Hayes Jacobs, H. (1997). *Mapping the big picture: Integrating curriculum and assessment, K–12*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Hayes Jacobs, H. (Ed.). (2004). *Getting results with curriculum mapping*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Udelhofen, S. (2005). *Keys to curriculum mapping: Strategies and tools to make it work*. Thousand Oaks, CA: Corwin Press.

### **Mapping Coursework**

#### *Curriculum Mapping: Charting the Course for Content*

- Two videos with facilitators guide
- By Heidi Hayes Jacobs, 1999
- Available through Association for Supervision and Curriculum Development, <http://www.ascd.org/portal/site/ascd>

#### *Curriculum Mapping I, II, III Courses*

- Multiple 30-hours of courses
- By Heidi Hayes Jacobs
- College credit available
- Available through Public Broadcasting Services, “TeacherLine”
- <http://www.pbs.org/teacherline/search/?q=curriculum+>

## **Tool 10: Getting Ready – Create Teacher “Buy-In”**

Teachers today, especially in struggling schools and districts, face an overload of initiatives and programs. It is important that curriculum mapping not be viewed as “one more thing” but as a process that has a high probability of changing teacher instructional practices, which in turn, will lead to increased student achievement.

As a first step, the district needs to review the initiatives at each school and assist its schools in reducing that number to a manageable few that focus directly on the instruction of the student groups not meeting AYP. Once the number of initiatives is reduced, teachers are more likely to accept and participate in designing a new curriculum. Other ideas for gaining teacher buy-in are listed below.

### **Ideas for Gaining Teacher Acceptance and Involvement in Designing a New Curriculum**

- Communicate early and often about the upcoming curriculum mapping and aligning plan.
- Have the leadership team(s) map first and share their work and findings with other teachers in informal ways, initially.
- Attend IDOE Title I sponsored curriculum mapping workshops with leadership and school teams. Share information learned at staff meetings.
- Conduct a book study (Tool 9).
- Begin with paper maps with the leadership team presenting them at staff meetings.
- Read and discuss personal stories from teachers, selected articles, and research (see below).

### **Personal Stories from Teachers, Selected Articles, Research, and Best Practices**

#### *Personal Stories*

1. Getting Results from the Local Level...Cobb County, Georgia

Martin, L. (Volume 1, No. 3) of “Curriculum Mapping Newsletter by Curriculum Designers.” Retrieved 3/9/09 from <http://www.curriculumdesigners.com/Static/Resources/Newsletters/Volume%20I,%20No,%203%20-%20Mapping%20Around%20the%20World.pdf>

*Overview:* A short reflection of one county’s first year of curriculum mapping from the view of the teachers and the assistant superintendent.

2. Mapping the Journey to Student Success

Miller, L. (2004). Retrieved 3/9/09 from [http://www.oct.ca/publications/professionally\\_speaking/september\\_2004/mapping.asp](http://www.oct.ca/publications/professionally_speaking/september_2004/mapping.asp)

*Overview:* A reader-friendly description of teachers’ experiences in curriculum mapping. Teachers from the Toronto School District describe processes and positive outcomes of mapping and present Heidi Hayes Jacob’s seven-step mapping process.

## *Research and Best Practices*

1. A Case Study of Key Effective Practices in Ohio's Improved School Districts  
Kercheval, A. (2003). Bloomington, IN: Indiana Center for Evaluation. Retrieved 3/9/09 from  
[http://www.indiana.edu/~ceep/projects/PDF/200107\\_Key\\_Effec\\_Prac\\_Interim\\_Report.pdf](http://www.indiana.edu/~ceep/projects/PDF/200107_Key_Effec_Prac_Interim_Report.pdf)  
  
*Overview:* In this descriptive study, teachers and administrators from 50 Ohio districts rank curriculum alignment as the number one practice that led to increased student achievement in their districts.
2. Changing and Monitoring Instruction  
Walberg, H. J. (2007) in *Handbook on restructuring and substantial school improvement* (pp. 77–90). Lincoln, IL: Center on Innovation and Improvement.  
  
*Overview:* Educational scholar H.J. Walberg states that aligning instruction with state standards is the first of ten principles for improving student achievement, especially for schools in restructuring.
3. How NLCB Drives Success in Urban Schools  
Zavadsky, H. (2006). *Educational Leadership*, 64(3), 69-73.  
  
*Overview:* A report of strategies used by 70 low-performing districts that applied for the Broad Prize for closing the achievement gap. Strategies implemented by all five finalists included developing and implementing curricula that were: (a) detailed and properly sequenced, (b) aligned between grades and across all schools, (c) developed by classroom teachers, and (d) often included higher expectations than the state standards.
4. Similar Students, Different Results (SSDR): Why Do Some Schools Do Better?  
EdSource, (2006, June). Retrieved 3/9/09 from  
<http://www.edsource.org/assets/files/SimStu05.pdf>  
  
*Overview:* Describes a large-scale survey of almost 3,000 teachers and principals in California to determine the practices they associated with high levels of student achievement. A “coherent, standards-based curriculum and instructional program” was selected as second only to “prioritizing student achievement.”
5. What Works in Schools: Translating Research into Action  
Marzano, R. J. (2003). Alexandria, VA: Association for Supervision and Curriculum Development.  
  
*Overview:* Marzano's determined in his extensive review of the research that “a guaranteed and viable curriculum” ranked first among 15 school-level factors that impact student achievement.

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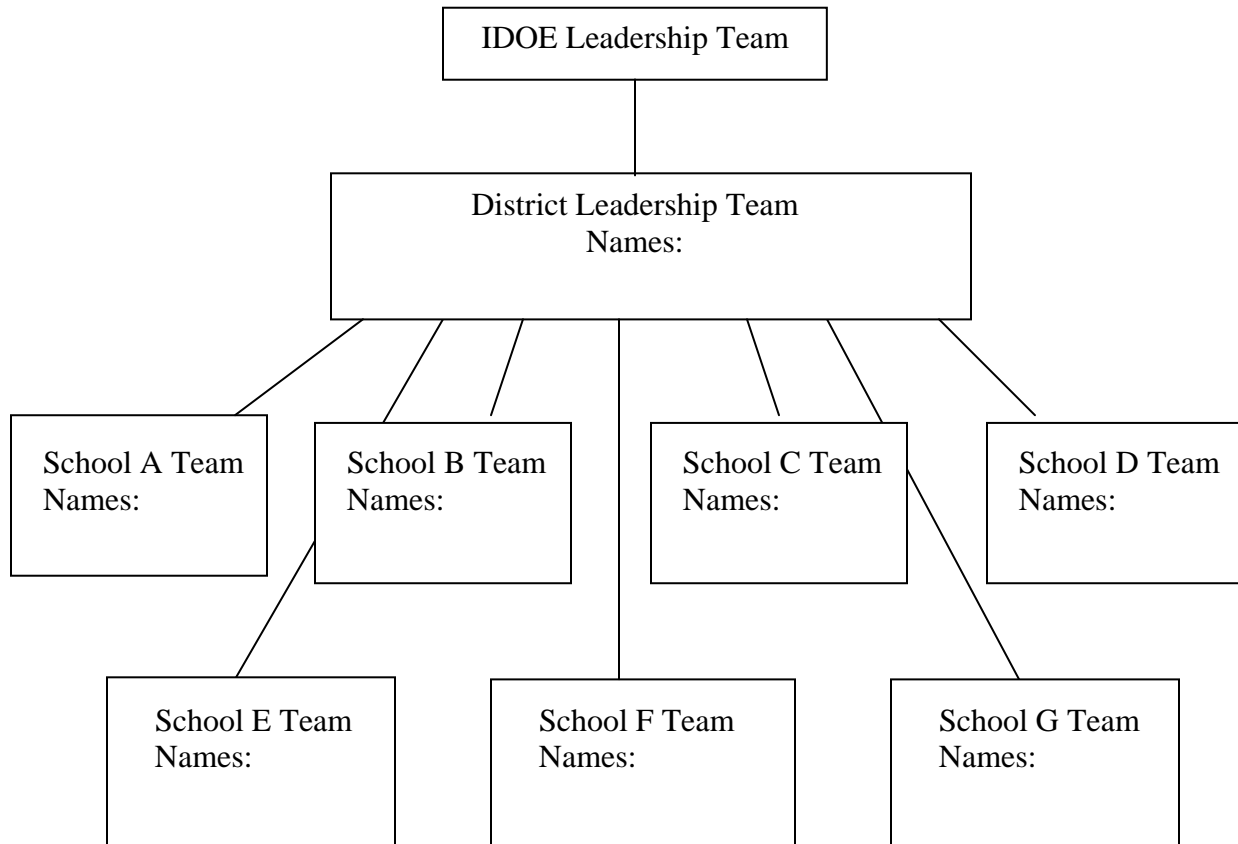
*Disclaimer:* The listing of the above resources does not indicate endorsement of a particular product, service, or person by the Indiana Department of Education.

## **Tool 11: Getting Ready – Establish a Leadership Team and an Organizational Structure**

The first step in preplanning the curriculum mapping and aligning process is to create a structure within the district and schools that allows for organizing, communicating, and implementing the work. A sample team organizational structure is shown in Figure 2. Districts are required to submit their organizational chart to IDOE, Title I within six months of the initial district workshop.

Teams at each school and at the district level serve as communication links, decision-makers, first adopters of the process, and trainers. Having a solid team that meets often and communicates well increases the level of teacher participation and consistency across the schools.

**Figure 2. Organizational Structure (sample)**



## Tool 12: Getting Ready – Interview and Hire a Consultant

Mapping software companies often indicate that they can provide all the needed professional development for the district and schools. However, IDOE Title I has seen that this is not always the case; additional training beyond the software mapping companies is often needed. Thus, IDOE, Title I requires all districts to use a curriculum mapping consultant either internally or externally. When interviewing the consultants, the district should consider the skills and experiences of the interviewee, as shown in Table 4.

**Table 4. Interviewing and Hiring a Consultant**

<b>The Consultant Has Experience With and Is Able to Assist Us In ...</b>	<b>Consultant 1</b>	<b>Consultant 2</b>	<b>Consultant 3</b>
<b>1.</b> Reworking schedules to find time for teachers to work together.			
<b>2.</b> Creating an organizational structure for mapping.			
<b>3.</b> Developing a culture of working collaboratively and sharing and critiquing maps.			
<b>4.</b> Creating a map of the implementation plan.			
<b>5.</b> Instructing teachers in the five required components, and especially in how to unpack the standards.			
<b>6.</b> Providing this number of days/hours of training: ___ on the theory, benefits, processes of curriculum mapping. ___ on unpacking the standards (including practice). ___ on reviewing other's maps (including practice).			
<b>7.</b> Developing consensus maps within and across grade levels and content areas.			
<b>8.</b> Using the online mapping system selected, including the summaries and reports.			
<b>Consultant's Experience and Dispositions to Consider</b>	<b>Consultant 1</b>	<b>Consultant 2</b>	<b>Consultant 3</b>
<b>1.</b> Has been a teacher or administrator within the past few years.			
<b>2.</b> Understands the requirements for schools and districts in improvement status under NCLB.			
<b>3.</b> Communicates well; adapts the training to the experience and needs of teachers; provides support, encouragement, and problem solving.			
<b>4.</b> Has worked extensively with IDOE state standards.			
<b>Consultant's Fee/Daily Rate</b>	<b>Consultant 1</b>	<b>Consultant 2</b>	<b>Consultant 3</b>
Consultant's fee or daily rate.			

## **Tool 13: Getting Ready – Select a Software Program for Mapping**

Ten years ago, teachers mapped their curriculum on large pieces of paper with columns for months, content, skills, and assessments. The papers were posted in the halls or in the faculty lounge, and teachers spent professional development days comparing and contrasting their maps to eventually create a large mural of a consensus map.

Today, computer software programs include templates for entering the map components and include searching and reporting features. Although these features expedite the entering of data, the most important factor still remains the conversations and discussions held between teachers.

IDOE Title I has studied the computer software programs and selected four such programs for districts to review. It is the district's responsibility to contact each company, meet with them, and pilot their systems for several weeks before deciding which one to purchase.

### **IDOE Title I Preferred Software Programs for Mapping** (listed in alphabetical order)

#### *Atlas Curriculum Management System*

Website: [www.rubicon.com/AtlasCurriculumMapping.html](http://www.rubicon.com/AtlasCurriculumMapping.html)

Address: One World Trade Center, Suite 1200, 121 SW Salmon St., Portland, OR 97204

Phone: 1-800-971-4200

#### *Build Your Own Curriculum*

Website: [www.schoolsoftwaregroup.com](http://www.schoolsoftwaregroup.com)

Address: School Software Group, 61 N. Meadow Row Court, Appleton, WI 54913

Phone: 1-800-596-0735

E-mail: [ctrina@schoolsoftwaregroup.com](mailto:ctrina@schoolsoftwaregroup.com)

#### *Curriculum Mapper*

Website: [www.clihome.com](http://www.clihome.com)

Address: Collaborative Learning, 1S660 Midwest Rd., Ste. 310, Oakbrook Terrace, IL 60181

Phone: 1-800-318-4555

Email: [info@clihome.com](mailto:info@clihome.com)

#### *TechPaths—A Curriculum Mapping System*

Website: [www.perfpathways.com](http://www.perfpathways.com)

Address: Performance Pathways, 5010 Ritter Rd., Ste. 119, Mechanicsburg, PA 17055

Phone: 866-457-1990

Email: [info@perfpathways.com](mailto:info@perfpathways.com)

Other providers may be suggested to IDOE, who then will investigate their products and review examples of their work to determine their acceptance as preferred providers

**Table 5. Criteria to Consider in Selecting a Software Program**

<b>The Program/System</b>	<b>Company 1</b>	<b>Company 2</b>	<b>Company 3</b>
1. Provides columns for the five essential components in a horizontal table, on a single page with a full text of the standards (not links to standards).			
2. Has Indiana state standards fully loaded for teachers to cut and paste into their maps.			
3. Allows for consensus maps and essential maps.			
4. Allows teachers to view one another's maps.			
5. Allows for recording of maps by various time frames: months, weeks, or grading periods.			
6. Searches and sorts by words or phrases, courses, grade levels, or standards to create a variety of reports with accompanying graphs and visuals.			
7. Includes spell-check and the ability to change fonts, bold, underline, etc.			
8. Is simple enough for novice users of computers.			
<b>The Company</b>	<b>Company 1</b>	<b>Company 2</b>	<b>Company 3</b>
1. Assists in developing an implementation plan.			
2. Assists in finding ways for teachers to find time to work together.			
3. Is well experienced with providing professional development around the five required components.			
4. Provides this number of days/hours of training: ___ about the software (including practice) ___ on the theory, benefits, and processes of mapping ___ on unpacking the standards (including practice) ___ on reviewing of other's maps (including practice)			
5. Costs: a. License per user b. Professional development c. Other			

## Tool 14: Mapping and Aligning Tasks – The First Six Months

Use Table 6 to create a timeline for the first six months. Indicate when each task will be completed and who will take the lead. At the end of six months from the March workshop, submit the timeline to IDOE, Title I, indicating on the chart those tasks completed.

**Table 6. Mapping and Aligning Tasks: The First Six Months**

<b>Tasks Planned and Completed</b>	<b>Lead Person(s)</b>	<b>Beginning Date</b>	<b>Completion Date</b>
1. Attended IDOE-sponsored mapping workshops with leadership and teams.			
2. Gained information about mapping through book studies, courses, videos, and other sources.			
3. Interviewed and hired a mapping consultant.			
4. Experimented with and purchased a software program.			
5. Created an organizational structure with school teams having representatives from all grade levels and content areas.			
6. Provided job descriptions for teams and developed an efficient communication system among the district, school, and classrooms for implementing mapping.			
7. Provided ongoing, in-depth training for leadership and school teams.			
8. Integrated the mapping process into the district improvement plan.			
9. Included and informed stakeholders of the mapping initiative: teachers; school and district administrators; school board; parents; union; and professional organizations.			
10. Completed and submitted the “Tasks: The First Six-Months” worksheet to IDOE Title I.			



## Tool 15: Mapping and Aligning Tasks – The First Year

Use Table 7 to create a timeline of when the tasks will occur and who will take the lead.

**Table 7. Mapping and Aligning Tasks: The First Year**

<b>Phase I: Tasks Planned and Completed</b>	<b>Lead Person(s)</b>	<b>Beginning Date</b>	<b>Completion Date</b>
1. All teachers received multiple training sessions about the mapping process and using the mapping software.			
2. Ongoing training was differentiated and/or accommodations were made for teachers with limited experience with technology.			
3. Teachers reached common understandings of mapping vocabulary and practiced through multiple sessions in entering the five essential components on the maps.			
4. Teachers received ample and sufficient professional time to create maps.			
5. Leadership team members were available to address teachers' questions as they began to map.			
6. The process included ongoing ways to measure and improve the quality of the maps.			
7. The focus of the mapping process was the discussions held by teachers in unpacking the standards into subskills.			

<b>Phase II: Tasks Planned and Completed</b>	<b>Lead Person(s)</b>	<b>Beginning Date</b>	<b>Completion Date</b>
1. Grade-level and content-areas teams read and wrote multiple drafts of own maps and offered ways to improve them.			
2. Cross-grade-level and cross-content-areas groups reviewed maps and noted repetitions, gaps, and lack of increased cognitive difficulty.			
3. The large group reviewed findings from cross-grade-level and content-areas groups.			
4. The large group made immediate changes in maps if consensus could easily be reached.			
5. When consensus could not be reached, the large group researched and investigated further to gain new information that would allow for consensus.			
6. All teachers actively participated in grade-level and content-area team mapping sessions.			
7. Teams may have begun mapping only some components, but within a few months, they included all required components.			
8. Team maps included adequate level of detail and are honest representations of the taught curriculum.			
9. The following have been sent to IDOE Title I: a. Mapping and Aligning Tasks Phase I & Phase II worksheets. b. Access codes/information for all online maps.			

## **Tool 16: Requirements for Districts in Corrective Action – Designing a New Curriculum**

1. If the district is not meeting adequate yearly progress (AYP) in English/language arts and mathematics, the district will first map and align the English/language arts curriculum.
2. The district will hire a curriculum mapping consultant, either internal or external. The consultant will provide numerous days of assistance to the district throughout the school year.
3. The district will use a mapping software program from the preferred vendor list. (If the district wishes to suggest an additional company, IDOE will investigate its products and review examples of its work to determine its acceptance as a preferred provider.)
4. The preplanning process will require about six months, after which time the teachers will begin to map in teams using the mapping software program.
5. The district's maps will show all five essential components in a table on a single screen including the state standard (preferably not a link to the standard).
6. The district will send a team to IDOE-sponsored workshops on mapping and aligning the curriculum. The team may consist of the superintendent, principals, teachers, and curriculum and Title I directors, as well as staff who represent the student subgroups that did not meet AYP.
7. The district will demonstrate that significant and sufficient professional development time is dedicated to curriculum mapping.
8. The district is responsible for ensuring that each school has developed by the end of two years a consensus E/LA or mathematics map that is of high quality and maintains the fidelity of the seven-step mapping process.
9. The district will require and monitor all K–12 English/language arts or mathematics teachers to ensure active participation in individual and group assignments and meetings towards developing a school consensus map.
10. The district will make their online maps available to IDOE, Title I.